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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,117	04/30/2001	Derek Leigh Lownsbrough	011.0201.01	5237

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EXAMINER	
AHMED, FAROOQUE	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/846,117	LOWNSBROUGH ET AL.	
	Examiner	Art Unit	
	Farooque Ahmed	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04/30/2001.*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/20/2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. This action is responsive to the application filed **04/30/2001.** Claims 1-38 are pending. Claims 1-38 Represent System and Method for Efficiently Forwarding Client Requests From a Proxy Server in a TCP/IP Computing Environment.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1-38,rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Clearly applicant does not clearly described & distinguish between terms such as "idle time" & "time – to-idle" and, not actively connection," warm idle, cold idle connection".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-38 are rejected under 35 USC § 102(e) as being anticipated by Smith et al., U.S. patent no. 6,308,238.

Smith teaches the invention as claimed includes. (See abstract).

In reference to claim 1Smith teaches a system for efficiently forwarding client requests in a distributed Computing environment, comprising:

(a) A socket receiving a plurality of non-proxiable requests commonly addressed to an origin server from individual sending clients;(Smith discloses application proxies establish and mange connections between server socket and clients, See abstract, figs 1,4,12,and column 1 lines 40-58; column 2, line1-35; column 4,lines 1-40; column 5 1-40).

(b) a time estimates generator dynamically generating, concurrent to and during processing of each request, time estimates of service availability based on a time-to-idle for sending the requests over each of a plurality of connections to the origin server; and (Smith discloses master process with executing code provide a connection to the server with plurality of client process request allover control with

various proxy. (See abstract, figs1-4 column 1, lines 37-67; column 2 lines 2-37; column 5 lines15-57).

(c) a connection manager selecting the connection to the origin server with a substantially highest service availability and a substantially lowest time-to-idle and forwarding each request to the origin server using the selected connection. (Smith disclosed adapter card managing connection and a proxy application receiving a client request over server and forwarding over fast bus connection. (See abstract, figs 1-5 column 1, lines 37-67; column4 lines 1-54; and column 5 lines15-57).

As to claim 2, Smith teaches the system as recited in claim 1, where the connection manager selecting a connection not actively sending a

request with a zero time-to-idle and not subject to a slow start overhead incurred responsive to flow control imposed by the sending client (Smith disclosed adapter card managing connection in various models of client process over sever Networks with TCP Initializing sending a data in register buffer (See fig 1-5, column 2 lines 1-60; column 3 lines 64-67; column4, 1-65;and column 5,15-67; column 6,4-63; column 8 lines 1-67).

As to claim 3, Smith teaches the system as recited in claim 2, where

the connection manager selecting a connection actively sending a request with a time-to-idle less than the slow start overhead, plus request transfer time if the connection is pipelined (Smith disclosed adapter card managing connection in various models of client process over sever Networks Initializing sending a data through FTP HTTP. (See figs 1-5, column 2 lines 1-60; column 3 lines 64-67; colunm4, 1-65; column 5 lines15-56; column 6 lines 4-63).

As to claim 4, Smith teaches the system as recited in claim 2 where the connection manager selecting a connection not actively sending a request with a zero time-to-idle and subject to the slow start overhead. (Smith disclosed adapter card managing connection with other client over sever Networks Initializing client process (See fig 1-5, column 2 lines 1-60; column 3 lines 64-67;column 4 1-65;and column 5 15-56; column 6 4-63;column 7 lines 14-54).

As to claim 5, Smith teaches the system as recited in claim 2 described further comprising: the connection manager selecting a connection actively sending a request with a time-to-idle less than a connection setup overhead, plus request transfer time if the connection is pipelined (Smith disclosed adapter card managing connection in various models of client process over sever Networks Initializing setting connection setting sending a data through FTP HTTP. over setting connection state. (See figs 1-5, column 2 lines 1-60; column 3 lines 64-67; column 4, lines1-65; and column 5 ines15-56; column 6 lines 4-63).

As to claim 6,Smith teaches the system as recited in claim 5, where the connection manager selecting a new connection in the absence of an existing connection with a time-to-idle less than the connection setup overhead (Smith disclosed Adapter card managing connection between second clients and server setting a client process connection. (See figs 4,5 7,column 7 lines 15-50; column 8 lines 8-67).

As to claim 7, smith teaches the system as recited in claim 5, where the connection manager selecting an existing connection with the Substantially lowest time-to-idle (Smith disclosed Adapter card with master process determined and

establishing a connection requested by first client. (See figs 4,5 7,column 7 lines 15-50; column 8 lines 8-67).

As to claim 8,Smith teaches the system as recited in claim 1,

Wherein the distributed operating environment is TCP/IP-compliant, the system further comprising:

the time estimates generator providing time estimates for each connection comprising at least one of TCP overhead, time-to-idle, idle time, and request transfer time (Smith disclosed Adapter card managing connection with master process determined with TCP/IP stack and establishing an idle connection by client application process. (See figs 1-5,column 5 lines 41-67; column 6 lines 15-50;column 8 lines 8-67)

As to claim 9, Smith the system as recited in claim 8 comprises TCP overhead, the system further comprising:

the time estimates generator calculating the TCP overhead by adding a three-way handshake overhead to a slow start overhead (Smith disclosed Master process determined TCP protocol stack with client process. (See figs 3,6,7, column 5 lines 41-67; column 7 lines 57-67; column 8 lines 13-50).

As to claim 10, Smith teaches the method of as recited in claim 8 where

the time estimates generator calculating the request transfer time by multiplying the size of the request by an average connection speed for the origin Server (Smith disclosed Master process connection request and a client data structures buffer with a great size of capacity. (See Figs 12-15, column 10 lines 36-67; column 11 lines 1-67; column 12 lines 22-64).

As to claim 11, Smith teaches the system as recited in claim 8 the time estimates generator calculating the time-to-idle upon each receipt of a request by adding the time-to-idle to the product of an average connection speed for the origin server multiplied by the sum of the request size and an estimated response size (Smith disclosed Master process determined a data accumulated queue with client process and establish a bus connection to server. (See Figs 7-15,column 8 lines 12-67;column 10 lines 1-67; column 9 lines 1-67; column 10,lines 36-67; colunm11 lines 1-67; column 12 lines 22-64).

As to claim 12, Smith teaches system of as recited in claim 8 where the time estimates generator calculating the time-to-idle upon writing data to a socket by subtracting the time-to-idle from the product of an average connection speed for the origin server multiplied by the amount of data written. (Smith disclosed Master process determined with client process calculating the storage data by adding by the length valid data accumulated queue with client process and establish a bus connection to server. (See Figs 7-15,column 8 lines 12-67;column 10 lines 1-67;column 9 column 10 lines 36-67; column 11 lines1-67; column 12, lines 22-64; column 13 lines 15-50).

As to claim 13, Smith teaches the system as recited in claim 8 where the time estimates generator calculating the time-to-idle upon reading data from a socket, prior to header data, by subtracting the time-to-idle from the product of an average connection speed for the origin server multiplied by the

mount of data read (Smith disclosed Master process determined with F/N client process ready queue, calculating the storage data from socket and by adding by the length valid data accumulated queue with client process and establish a bus connection to server. (Fig 7-15,column 8 lines 12-67;column 10lines 1-67; column 9 column 10,lines 36-67; colunm11 lines1-67; column 12, lines 22-64; column 12 lines 22-64; column 13 lines 15-50).

As to claim 14,Smith teach the system as recited in claim 8 where a proxy configured in a location comprising at least one of local to the sending clients, in the infrastructure of the distributed computing environment,

and local to the origin server (Smith discloses that proxy application retrieved and identify first Clint data structure client requests determined the buffer had located it request.). (See abstract fig 15, column 12 lines 13-67).

As to claim 30 Smith teach the system where A system for efficiently forwarding client requests from a proxy server in a TCP/IP computing environment, comprising: (See abstract, column 5 lines 40-67).

means for receiving a plurality of transient requests from individual sending clients, each request being commonly addressed to an origin server; (Smith discloses application proxies establish and mange connections between server socket and clients See abstract, fig 1,4,12,and column 1 lines 40-58; column 2 line1-35; column 4,lines 1-40; column 5 lines1-40).

means for dynamically calculating, concurrent to receiving and during

processing of each request, time estimates of TCP overhead, slow start overhead, Smith discloses master process with executing code provide a connection to the server with plurality of client process request allover control with various proxy. (See abstract, 1-4, fig column 1, lines 37-67, column 2 lines 2-37, column 5 lines15-57).

time-to-idle, and request transfer time for sending the requests over each of a plurality of managed connections to the origin server; (Smith disclosed adapter card managing connection and a proxy application receiving a client request over server and forwarding over bus connection. (See abstract, figs 1-5, column 1lines 37-67; column 4 lines 1-54; and column 5 lines15-57).

means for choosing the managed connection from, in order of preferred selection, a warm idle connection, an active connection with a time-to-idle less than a slow start overhead, a cold idle connection, an active connection with a time-to-idle less than a TCP overhead, a new managed connection, and an existing managed connection with a smallest time-to-idle; and (Smith disclosed Master process select a active connection determined TCP protocol stack with client process. (See figs 3, 6,7, column 5 lines 41-67; column 7 lines 57-67; column 8 lines, 13-50).

means for forwarding each request to the origin server over the selected managed connection. (Smith disclosed Adapter card with master process determined and establishing a connection requested by first client. (See figs 4,5 7,column 7 lines 15-50; column 8 lines 8-67).

As to claim 31, Smith teach the system as recited in claim 30 where

means for adding the request transfer time during each active connection selection if the managed connection is pipelined. Smith disclosed adapter card managing connection in various models Networks Initializing sending a data through FTP HTTP. (See figs 1-5, column 2 lines 1-60; column 3 lines 64-67; column 4 lines1-65; and column 5 lines15-56; column 6 lines 4-63).

As to claim 32, Smith teach the system as recited in claim 30 where

means for calculating the TCP overhead by adding a three-way handshake overhead to a slow start overhead', (Smith disclosed Master process determined TCP protocol stack with client process. (See figs 3,6,7, column 5 lines 41-67; column 7 lines 57-67; column 8 lines 13-50).

means for calculating the request transfer time by multiplying the size of

the request by an average managed connection speed for the origin server; and means for calculating the time-to-idle, comprising: (Smith disclosed Master process determined with F/N client process ready queue, calculating the storage data from socket and by adding by the length valid data accumulated queue with client process and establish a bus connection to server. (See Figs 7-15,column 8 lines 12-67; column 9 lines 1-67; column 10,lines 36-67;column 11 lines1-67; column 12 lines 22-64; column 12 lines 22-64; column 13 lines 15-50).

upon each receipt of a request, means for adding the time-to-idle to

the product of an average managed connection speed for the origin server multiplied by the sum of the request size and an estimated response size; (Smith disclosed Master process determined a data accumulated queue with client process

and establish a bus connection to server. (Fig 7-15,column 8 lines 12-67,column 10 lines 1-67, column 9 column 10,lines 36-67, colunm11, 1-67lines columns 12, lines 22-64).

upon writing data to a socket, means for subtracting the time-to-

idle from the product of an average managed connection speed for the origin Server multiplied by the mount of data written; and Smith disclosed (Smith disclosed Master process determined with client process calculating the storage data by adding by the length valid data accumulated queue with client process and establish a bus connection to server. (Fig 7-15,column 8 lines 12-67,column 10lines 1-67, column 9 column 10,lines 36-67, colunm11, lines1-67column 12, lines 22-64 column 12 lines 22-64, column 13 lines 15-50).

upon reading data from a socket, prior to header data, means for

subtracting the time-to-idle from the product of an average managed connection speed for the origin server multiplied by the amount of data read (Smith disclosed Master process determined with F/N client process ready queue, calculating the storage data from socket and by adding by the length valid data accumulated queue with client process and establish a bus connection to server. (See Figs 7-15,column 8 lines 12-67;column 10 lines 1-67; column 9 column 10 lines 36-67; colunm11 lines1-67; column 12 lines 22-64; column 12 lines 22-64; column 13 lines 15-50).

As to claim 33, Smith teaches the system as recited in claim 30 where a system, wherein each transient request is communicated in accordance with HTTP (Smith

teaches Method for Efficiently Forwarding HTTP request to clients in proxy server Computing Environment. (See Figs 3,column 3,64-67; column 4 lines9-40; column 6-lines 16-54).

Claims 15-29 & 34-38 do not teach or define any new limitations above claims 1-14 & 30-33 and therefore are rejected for similar reasons.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farooque Ahmed whose telephone number is 703-605-4212. The examiner can normally be reached on M-F 8:30 to 5:00

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703) 308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Farooque Ahmed/Examiner
Art Unit 2157

SALEH NAJJAR
PRIMARY EXAMINER